Patent claims

1. Recombinant fusion protein consisting of at least a first and second amino acid sequence, characterized in that the first sequence has the biological activity of glucose dehydrogenase.

2. Recombinant fusion protein according to Claim 1, characterized in that the second sequence is any recombinant protein/polypeptide X or represents parts thereof.

3. Recombinant fusion protein according to Claim 2, characterized in that it may additionally have at least one other recognition sequence ("tag sequence") suitable for detection.

4. DNA, characterized in that it codes for a fusion protein according to Claims 1-3.

5. Expression vector, characterized in that it comprises a DNA according to Claim 4.

6. Host cell for expressing recombinant proteins/polypeptides, characterized in that it comprises an expression vector according to Claim 5.

7. Use of glucose dehydrogenase as detector protein for any recombinant protein/polypeptide X in a fusion protein according to Claims 1 to 3.

8. Use of glucose dehydrogenase in a detection system for the expression of a recombinant protein/polypeptide X as constituent of a fusion protein according to Claims 1 to 3.

9. Use of glucose dehydrogenase for detecting protein-protein interactions, where one partner corresponds to the recombinant protein/polypeptide X in Claims 1 to 3.

10. Use of glucose dehydrogenase in a fusion protein according to Claims 1-3 as detector protein for any third protein/polypeptide which is not a constituent of the fusion protein according to Claims 1-3 and is able to bind to the second sequence of the protein/polypetide X in the said fusion protein.

11. Use of an expression vector according to Claim 5 in optimizing the expression of a recombinant protein/polypeptide X in a recombinant preparation process.

12. Use of a host cell according to Claim 6 in optimizing the expression of a recombinant protein/polypeptide X in a recombinant preparation process.

13. Method for the rapid detection of any recombinant protein/polypeptide X by gellectrophoresis, characterized in that a fusion protein according to Claims 1 to 4 is prepared and fractionated by gel electrophoresis, and the recombinant protein/polypeptide to be detected in the gel is visualized via the enzymic activity of glucose dehydrogenase.

14. Method according to Claim 13, characterized in that SDS-polyacrylamide gel electrophoresis (SDS-PAGE) is used as gel electrophoresis method.

15. Method according to Claim 13, characterized in that a colour reaction based on tetrazolium salts

is employed to detect the enzymic activity of glucose dehydrogenase.

16. Method according to Claim 15, characterized in that iodophenylnitrophenyl-phenyltetrazolium salt (INT) or nitro blue tetrazolium salt (NBT) is employed as tetrazolium salt.

17. Method according to Claims 13 to 16, characterized in that the specific staining of the glucose dehydrogenase is followed by a general protein staining.